

17/15

PATENT  
Docket No.: 1093/204

**CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"**

I hereby certify that this paper or fee is being deposited with the United States Postal Service as "FIRST CLASS MAIL" in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on January 17, 2003.

  
Julie Nguyen

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**RECEIVED**

In the application of:

Liu, et al.

Serial No.: 10/076,170

Filing Date: February 11, 2002

For: APPARATUS AND METHOD FOR  
SMALL-VOLUME FLUID  
MANIPULATION AND  
TRANSPORTATION

Examiner: Not Yet Assigned

JAN 27 2003

Group Art Unit: 1745

TC 1700

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. § 1.97**

**BOX NON-FEE**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Copies of the documents are also submitted herewith. The Examiner is requested to make these documents of record.

This Information Disclosure Statement is submitted:

- Within three months of the application filing date or before receipt of a first Office Action on the merits; accordingly, no fee or separate requirements are required.
- After receipt of a first Office Action on the merits but before a final Office Action or Notice of Allowance.
  - A fee is required. A check for payment of the fees is attached.
  - A Certification under 37 C.F.R. § 1.97(e) is provided below; accordingly; no fee is believed to be due.
- After receipt of a final Office Action or Notice of Allowance, but before payment of the issue fee. Accordingly, a Petition requesting consideration of the Information Disclosure Statement, an authorization to charge our deposit account, and a Certification under 37 C.F.R. § 1.97(e) are provided herein.

The undersigned declares that:

Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement.

- No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.

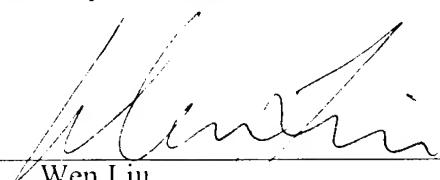
The Assistant Commissioner is hereby authorized to charge any fees which may be required by this statement to **Deposit Account Number 501288** referencing docket no. 1093/204.

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

This Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

Dated: January 17, 2003

Respectfully submitted,

By:   
Wen Liu  
Registration No. 32,822

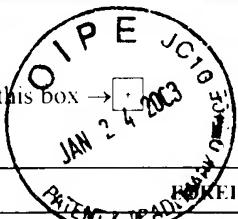
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	10 076,170
				Filing Date	February 11, 2002
				First Named Inventor	Liu, et al.
				Group Art Unit	1745
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	1093/204

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	U.S. Patent Document No.	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	
	1.	5,593,564	Templin, et al.	01-14-1997	
	2.	6,136,269	Winkler, et al.	10-24-2000	
	3.	6,149,787	Chow, et al.	11-21-2000	
	4.	6,280,589	Manz, et al.	08-28-2001	
	5.	6,235,175	Dubrow, et al.	05-22-2001	
	6.	6,306,273	Wainright, et al.	10-23-2001	
	7.	6,306,659	Parce, et al.	10-23-2001	
	8.	6,321,791	Chow	11-27-2001	
	9.	6,322,683	Wolk, et al.	11-27-2001	
	10.	5,750,015	Soane, et al.	05-12-1998	
	11.	6,001,229	Ramsey	12-14-1999	
	12.	6,010,607	Ramsey	01-04-2000	
	13.	6,033,546	Ramsey	03-07-2000	
	14.	6,010,608	Ramsey	01-04-2000	
	15.	5,858,195	Ramsey	01-12-1999	
	16.	6,090,251	Sundberg, et al.	07-18-2000	
	17.	6,110,343	Ramsey, et al.	08-29-2000	
	18.	6,117,396	Demers	09-12-2000	
	19.	5,573,651	Dasgupta, et al.	11-12-1996	
	20.	5,441,613	McCormick, et al.	08-15-1995	
	21.	5,169,510	Lunte, et al.	12-08-1992	

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#### FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number				
1.		EP	0620432	CIBA-GEIGY AG	10-19-1994	<b>RECEIVED</b>	
2.		WO	98/49548	Caliper Technologies	11-05-1998	JAN 27 2003	
3.		WO	00/65337	Sandia Corporation	11-02-2000		
4.		WO	00/22409	University of Alberta	04-20-2000	<b>TC 1700</b>	
5.		WO	00/62039	Northeastern University	10-19-2000		

#### OTHER PRIOR ART

Examiner Initials	Ref. No.	Title
	1.	“Squeezing Micropumps for Elastomer Microchips: Picoliter-Handling Capability”, by Kwanseop Lim, et al., Micro Total Analysis Systems (2001) pgs. 401-402.
	2.	“Monolithic Microfabricated Valves and Pumps by Multilayer Soft Lithography”, by Marc A. Unger, et al., Science (2000), Vol. 288, pgs. 113-116.
	3.	“Optimization of High-Speed DNA Sequencing on Microfabricated Capillary Electrophoresis Channels”, by Shaorong Liu, et al., Analytical Chemistry (1999) Vol. 71, pgs. 566-573.
	4.	“Electroosmosis: A Reliable Fluid Propulsion System for Flow Injection Analysis”, by Purnendu K. Dasgupta, et al., Analytical Chemistry (1994) Vol. 66, pgs. 1792-1798.
	5.	“Generating Electrospray from Microchip Devices Using Electroosmosis Pumping”, by R.S. Ramsey, et al., Analytical Chemistry (1997) Vol. 69, pgs. 1174-1178.
	6.	International Search Report of Counterpart PCT Application No. PCT/US02/04295

Examiner Signature		Date Considered	
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